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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,783	02/28/2002	Philip I. Straub	1528.016US1	8987
21186	7590	11/17/2003	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			GIBSON, ERIC M	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant No.	Applicant(s)
	10/086,783	STRAUB ET AL.
	Examiner Eric M Gibson	Art Unit 3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,4-7 and 9-29 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 7 and 9-29 is/are allowed.
- 6) Claim(s) 1 and 4-6 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 February 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/2003 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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2. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Honeywell Primus Epic (Epic) avionics system (Al Ditter, An Epic in the Making, Commuter World, December 1996-January 1997, pages 16, 18-21; William B. Scott, Pentium Powers 'Epic' Integrated Avionics, Aviation Week & Space Technology, November 18, 1996, pages 67-69; James Holahan, LCDs, Mice on the Flight Deck!, Aviation International News, November 1, 1996, pages 56-58; Fred George, Introducing Primus Epic, Business & Commercial Aviation, November 1996, pages 116, 118-120) in view of Hayes et al. (US006112140A).

a. As per claim 1, the Epic system teaches a MFD including a bezel having controls thereon adapted for controlling communications devices, navigational devices, and equipment sensors (Epic contemplates both "soft keys" and "hard keys" for input, see Holahan at p. 56) and a display adapted to provide a graphical backup presentation of important flight data (see photo Ditter at p. 16 showing identical displays on left and right), including communication, navigation, and engine data (see Holahan, p. 56). The Epic system does not teach that the backup display is "automatically" provided. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a backup unit would relieve this burden (column 4, lines 50-56). The Epic system is fully redundant and has the capability through its "windowing" of displays to provide for a graphical representation of chosen information. The capability and desirability of making what could be

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accomplished manually in the Epic system, automatic, is found in the Hayes reference, wherein the automatic back-up presentation of data is taught as a way to relieve a burden to the pilot. It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

- b. As per claim 4, Epic is programmable per individual application (Holahan at p. 58).
- c. As per claim 5, the Epic system switches display screens through the "toggle" of a soft key on the screen (Holahan at p. 56).
- d. As per claim 6, the Epic system is dynamically configurable through selection of the various menus.

Allowable Subject Matter

- 3. Claims 7 and 9-29 are allowed.
 - a. As per amended independent claim 7, the applicant's arguments with respect to claim 7 in the reply filed 10/20/2003 (pages 8-13), in addition to the explanation given during the interview conducted on 8/28/2003 (Paper No. 6), are persuasive that the prior art does not teach or suggest the limitation of graphically displaying all the important flight information data in a substantially similar format, size, location and perspective when one of the first or second instrument panels fail, in a backup mode as claimed.

- b. Claims 9-14 serve to further define the invention of claim 7 over the prior art.
- c. As per amended independent claim 15, the newly added limitation that the PFD and MFD are adapted to graphically display full flight information, *originally provided between the PFD and MFD*, in an identical format and size, automatically in the event of a failure as claimed, is not taught or reasonably suggested in combination by the prior art.
- d. Claims 16-20 serve to further define the invention of claim 15 over the prior art.
- e. As per newly amended independent claim 21, the added limitation that the set of flight data, *which were previously, collectively displayed using the more than one multifunction displays*, is automatically graphically replaced on another display in the event of a failure as claimed, is not taught or reasonably suggested in combination by the prior art.
- f. Claims 22-28 serve to further define the invention of claim 21 over the prior art.
- g. As per newly added independent claim 29, the prior art does not teach or reasonably suggest in combination the claimed invention including that the PFD and MFD are adapted to graphically display full fight information data, originally provided between the PFD and MFD in an identical format and size in a reversionary mode, automatically if either the PFD or MFD is inoperable.

Response to Arguments

4. Applicant's arguments filed 10/20/2003 have been fully considered but they are not persuasive with respect to claims 1 and 4-6.

a. The amendments to independent claims 7, 15, 21, and also newly added independent claim 29, recite limitations that define the invention over the teaching of the Epic system as explained in the reasons for allowance above. Claims 1 and 4-6, however, do not contain similar language that would define the present invention over that system. Specifically, the Epic system, taken as a whole, provides for a completely redundant graphical cockpit with the ability to manually reconfigure the system through its "windowing" capabilities. The teaching of "automatically" implementing the reconfiguration is supplied by the teaching of Hayes, which provides the requisite motivation, namely relieving a burden upon the pilot, for making the modification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Gibson whose telephone number is (703) 306-4545. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (703) 308-3873. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

EMG


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